

Suicide Avoidance System Based On Ceiling Fan

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Abstract:

Nowadays suicide attempts among the youngsters are gradually increasing and predominantly they attempt it by hanging on ceiling fans. A new system is designed to prevent this type of suicide attempt. In this system a weight sensor is connected with the fan's head. When the person tries to attempt suicide the weight sensor activates the fan rod extends downwards and ensure safe landing of the person and indication message is wirelessly transferred to the authorized person, simultaneously an alarm gets triggered ON to avoid further suicide attempt. Currently there are no existing products to avert suicides by hanging from ceiling fans.

Keywords: Suicide, Ceiling fan, Microcontroller, GSM.

I. INTRODUCTION

The system is developed to avoid suicide attempt by hanging. This system also alerts the people in the surrounding and also an authorized person who is not near at that time regarding the victim's suicide attempt. The following statistics shows the grave reality

- 1) 15 suicides per hour in INDIA.
- 2) 1,35,445 lives lost by committing suicide in 2016 according to National Crime Record Bureau.
- 3) 48 suicide cases/day in TN 2016.
- 4) 30-35% of all these attempts were made by hanging.

II. PROPOSED METHODOLOGY

A. HARDWARE COMPONENTS

This system has inner shaft and outer shaft. The outer shaft has weight sensor and microcontroller module. The inner shaft connects the fan with the outer shaft. The inner shaft movement is controlled by the actuator.

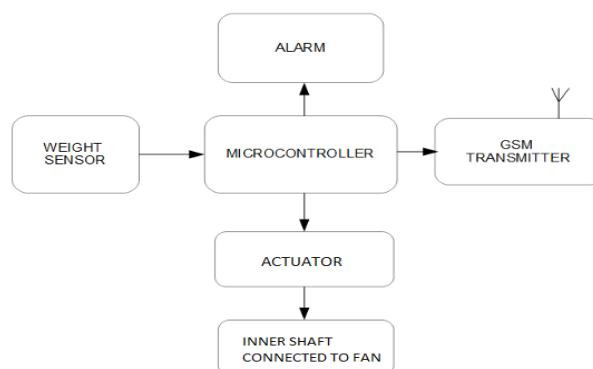


Fig. 1. Functional Block Diagram

B. THRESHOLD PARAMETER

When the person attempt suicide weight sensor provides the value greater than threshold level. Threshold level for the weight sensor is assigned as 30 kilogram. Once this threshold level is attained by the weight sensor it enables the output port of a microcontroller.

III. WORKING OF THE MODEL

The output port of a microcontroller energizes the actuator, alarm and GSM transmitter. When the actuator is energized, it extends the inner shaft towards ground for safe landing of the victim. When

the GSM module gets the serial data from the microcontroller, the alert message is wirelessly transmitted to the relatives through GSM transmitter. The GSM module helps the relatives in remote place to prevent the victim from further suicide attempt.

IV. CONCLUSION

Nowadays suicide attempts among the youngsters are gradually increasing and predominantly they attempt it by hanging on ceiling fans. This innovation will be very much helpful to save the depressed victims and alert their relatives to avoid further suicide attempt.

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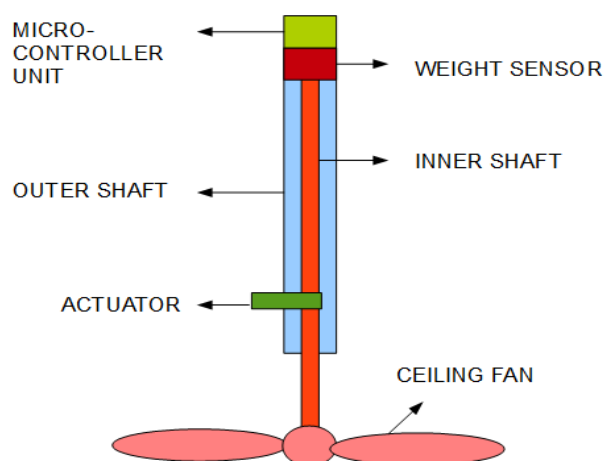


Fig. 2. Before victim's suicide attempt

When the alarm gets the data from the microcontroller, it makes a loud sound to alert the inmates of the house to save the victim. AT commands are used in the GSM transmitter to enable the GSM module. Embedded C program is used for programming the microcontroller.

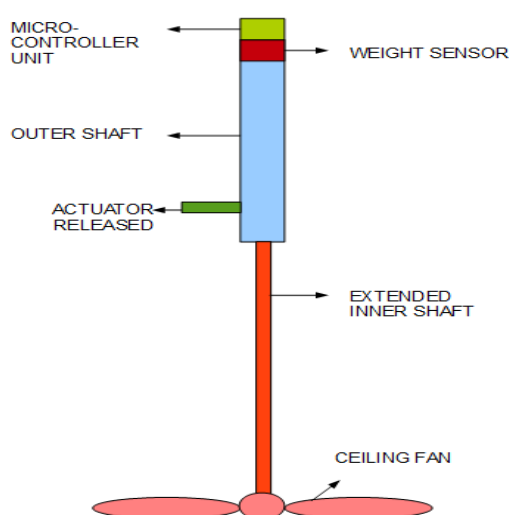


Figure 3: After victim's suicide attempt